X

BY ORDER OF THE LIEUTENANT GOVERNOR OF BENGAL * FORWARDED

PROGRESS REPORT

OF

FOREST ADMINISTRATION

IN

BENGAL SECRETARIAT LIBRARY

AJMERE-MERWARA

FOR

1889-90.

1891.

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No. 983-F., dated Calcutta, the 2nd December 1890.

From—SIR E C. BUCK, Secretary to the Government of India, Revenue and Agricultural Department,

To—The Chief Commissioner of Ajmere.

I AM directed to acknowledge the receipt of your letter No. 2908-S., dated the 13th October last, submitting the Annual Progress Report on Forest Administration in Ajmere and Merwara for the year 1889-90, together with your Resolution thereon and remarks by the Commissioner.

2. The Report, which was due on the 1st September, did not reach the Government of India until the 22nd October, and I am to desire that arrangements may be made for its more punctual submission next year.

3. Although no additions were made to the Reserves during the year, the area under forest control was increased by the addition of certain village lands which their owners were induced, in their own interests, to make over to the Forest Department for management. Six such areas, containing in all 4,395 acres, were brought under this system of control during the year, so that, including the village *bir* of 440 acres belonging to Makhupura—which, although restored to the jagirdar owner, as stated in the previous year's Report, was again resumed by the Forest Department—and a small village area of 400 acres already under management, the total area of these "*Village Reserves*" amounted at the close of the year to 5,235 acres, or 8 square miles. I am directed by His Excellency in Council to express the satisfaction felt by the Government of India at the progress made in this direction, which is the chief feature in the record of the year's work. I am, however, to say that it is a matter for regret that it is not yet feasible to place these village areas under the protection of the special Forest Law by declaring them State Forests in the manner suggested in the orders passed on the Report for 1887-88. The question of bringing the Village Reserves under special legislation, which will facilitate their management, is now under the consideration of the Government of India.

4. It is noticed that improvements in the records of rights in the Reserves are contemplated, and that during the year the boundary marks and fences were kept in repair. The advisability of having Working-Plans prepared for the Ajmere forests was urged by the Government of India when reviewing the Report for the preceding year, and the Governor General in Council is glad to observe that the subject is receiving your attention.

5. The protection of the forest areas against trespass and from injury by fire would appear to have been successfully accomplished. The offences against the Forest Rules were mostly, it is stated, of a petty nature, and their number was less than during the previous year; while, as regards forest fires, the result was exceptionally satisfactory, only two insignificant fires, which burnt over 7 acres, having occurred during the year. The cost of fire-protection was reduced to less than one-half of what it amounted to in the preceding year, owing, it is explained, to the fire-lines having been burnt free of charge by neighbouring villagers in return for the grass growing on them. The adoption of this system in future years will doubtless be encouraged.

6. It is stated that, owing to the partial failure of the rains and a consequent scarcity of fodder, the whole of the Reserved area, with the exception of some 2 square miles in Ajmere, was thrown open to grazing during a part of the year. It is satisfactory to find that the reservation of forests has thus been of practical service to the population. But, though the Government of India recognize that the object of reserving areas in Ajmere, as elsewhere, is that they may be managed in the interests of the community, I am to point out that, in view of the relatively small area Reserved and of what is stated as to the injurious effect of grazing on reproduction in Ajmere, it may not always prove to be in the interests of the people that all the Reserved areas should be grazed over even in years of

scarcity. The question is one which can only be determined with due regard to the object with which the Reserved areas are maintained, as well as the local circumstances affecting them; but it is obvious that under any circumstances a system of exploitation by cattle involves much waste, as the animals trample down and injure more than they eat. I am, therefore, directed to suggest that, in order to increase the yield of fodder and other produce, the question of closing a material proportion of the Reserves to grazing and of permitting only the *cutting* of grass and fodder should be further considered.

7. The improvement of the forests by artificial means appears to have been carefully attended to, and plantations were extended as far as the funds available permitted. His Excellency in Council is, however, of opinion that improvements on a large scale can only be effected through the protection of the forests from injury, more especially from injury by cattle and by browsing animals, and directs me to draw your special attention to the remarks made on the subject of natural reproduction in paragraphs 29 and 30 of the Sub-Assistant Conservator's Report.

8. The outturn from the forests, including the estimated value of the free grants, compares as follows with that of the preceding year :—

Class.	Timber.	Fuel.	Bamboos.	Minor produce.	Remarks.
	c. ft.	c. ft.	No.	Rs.	
Government agency	...	208	...	...	The minor produce was almost entirely *grass*. The cause of the smaller quantity of fuel consumed during the year is not explained.
Purchasers	3,474	185,692	12,412	2,482	
Free-grants ...	2,145	...	...	80,344	
Right-holders ...	...	...	...	2,072	
Total in 1889-90	5,619	185,900	12,412	84,898	
Total in 1888-89	...	227,480	15,081	73,601	
Difference in 1889-90	+5,619	—41,580	—2,669	+11,297	

9. Although the revenue was lower during the year under review than during the previous year, the expenditure was also less, so that the deficit on the year's working was considerably less than hitherto. It is explained that had the value of some grass supplied to the Military Department been realized, the receipts of the year would, for the first time since forest conservancy was undertaken in Ajmere, have exceeded the expenditure. Actually, the financial results compared with those of the previous year were as follows :—

Year.	Receipts.	Charges.	Deficit.
	Rs.	Rs.	Rs.
1889-90	11,592	12,701	1,109
1888-89	13,574	15,677	2,103
Decrease in 1889-90	1,982	2,976	994

10. In conclusion, I am to say that the Government of India concur with you in considering that the satisfactory record of the work done during the

year is creditable to the Forest Officer, Mr. Hira Singh, and to convey the thanks of His Excellency in Council for the interest taken by you and by the Commissioner of Ajmere-Merwara in the working of the Forest Department in that Province.

No. 984-F.

COPY, with copy of the Report, forwarded to the Government of the North-Western Provinces and Oudh, for communication to the Conservator of Forests, School Circle.

No. 985-F.

COPY, with copy of the Report, forwarded to the Foreign Department for information.

Statement of discrepancies noticed in the Ajmere Forest Administration Report for 1889-90.

(1) *Paragraph 9 of Commissioner's Memorandum.*—The amounts representing receipts from fines and forfeitures do not agree with the figures entered against Sub-head V. a. under "Receipts" in Form No. 58.

(ii) The first two Appendices following the prescribed forms, and which show in detail the Revenue and expenditure of the Ajmere and Merwara Districts separately, do not appear to be necessary in view of what is said in the second clause (revised) of section 238 of the Forest Department Code.

[G. C. F.]

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BENGAL SECRETARIAT LIBRARY

PROGRESS REPORT

OF

FOREST ADMINISTRATION IN AJMERE-MERWARA, 1889-90.

No. 2908 S., dated Indore, the 13th October 1890.

From—LIEUTENANT-COLONEL G. F. L. MARSHALL, R.E., Secretary to the Chief Commissioner, Ajmere,

To—The Secretary to the Government of India, Revenue and Agricultural Department.

I AM directed by the Chief Commissioner of Ajmere and Merwara to submit herewith the Annual Report of Forest Administration in Ajmere and Merwara for the year 1889-90 accompanied by a copy of the Resolution passed by the Chief Commissioner thereon.

Extract from the Proceedings of the Chief Commissioner of Ajmere, in the Public Works Department, No. 2907 S., dated 13th October 1890.

READ—

The Annual Progress Report of Forest Administration in Ajmere and Merwara for the year 1889-90 by Mr. Heera Singh, Sub-Assistant Conservator of Forests, with a review thereon by the Commissioner of Ajmere and Merwara, received under cover of Commissioner's letter No. 96 F., dated the 13th September 1890.

RESOLUTION.

Area and Boundaries.

2. The year under report showed no change in the areas of the Ajmere and Merwara Forest Reserves, which amounted as last year to 139 square miles or 89,264 acres, the details being as follows :—

	Acres.
Khalsa	84,493
Jagir	4,093
Istimrar	678
TOTAL	89,264

3. From the Sub-Assistant Conservator's Report it appears that this area is subject to correction, as it includes some patches of cultivated land. These should be deducted in the next report.

4. Besides the above an area amounting to 5,274 acres, which is not brought under the Ajmere Forest Regulation, is managed by the Forest Department.

Village Reserves.

5. It is satisfactory to notice that considerable progress has been made in extending this system during the year. Six new village Reserves, comprising an area of about 4,000 acres, are reported to have been formed in the villages of Chachiawas, Srinagar, Saradna, Bagri, Kotkirana, and Dadola. Besides this

the village Bir of Makhupura, which was restored to the Jagirdar, as reported in the last year's report, was again resumed by the Forest Department on the same conditions as those on which it was first formed.

6. The total area of village Reserves under the management of the Forest Department is now reported to be 5,235 acres. This result is satisfactory. The Sub-Assistant Conservator has responded to the instructions given him on the subject with energy and tact, and the District Officers are alive to the importance of adding to these village Reserves by all available means, as State Forests are not yet in a condition to supply fully the requirements of the country, and the excessive grazing to which they are yearly subjected materially retards their further progress.

7. The Government of India in their orders on the last year's report suggested that the management of village Reserves should be undertaken by the Forest Department, by declaring them State Forests; but, it is now reported that in the present state of the country this arrangement is not feasible. It is, however, hoped that the passing of the Draft Bill relating to Private Forests and Mountain Land Preservation will do away with the difficulties which are now felt in dealing with the village forest enclosures made over to be managed by the Government Forest Department.

Fencing.

8. Ten new boundary pillars were erected during the year. No new fencing was erected during the year. The existing fences were kept in thorough repair at the moderate cost of R74.

Register of Rights.

9. Certain omissions affecting the rights of villagers in the register of rights were brought to the notice of the Commissioner, who passed orders on them and directed that a complete list of all the omissions to be rectified should be prepared. This list has not yet been received, but will be forwarded to Government in due course, so that the necessary corrections may be formally sanctioned.

Survey.

10. The boundaries of some of the Forest Reserves are reported to have been checked and the omissions of pillars noted.

Working Plans.

11. The working of the Forest operations was, as usual, carried on according to the programme for the year, except in two cases, namely, the area of fuel cutting was less than that laid down in the plan of operation, owing to unexpected falling off in the demand for fuel, and one new *chowki*, not provided for in the plan, was constructed at Rajwa. The attention of the Forest Officer has been drawn to the necessity of drawing up regular working-plans for a period of years instead of annual plans of operation. These orders must not be lost sight of.

Breaches of Forest Rules.

12. Breaches of Forest Rules were much less numerous than those of the previous year. The total number of offences was 235, as against 286 during the previous year. Out of this number 230 were compounded by the Forest Officer. The offences were mostly of a petty nature. This favourable result

is partly due to the fact that very petty offences were disposed of by the confiscation of the implements used in committing them.

14. The number of cattle impounded was more than that of the previous year, the respective numbers being 4,197, against 3,868. Notwithstanding the increase in the number of cattle impounded, the receipts from fines showed a falling off of R17. This is explained by the fact that the number of impounded cattle was mostly made up of small cattle, such as sheep, goats, &c.

Forest Fires.

14. The Chief Commissioner is glad to see that the year under review was marked by success in this respect. Only two insignificant fires are reported to have occurred during the year, destroying a small area of seven acres. The area burnt during the previous year was 466 acres. Out of the area that was successfully protected, 79,419 acres were protected by the adoption of special measures. The total cost of fire protection was only R219, against R596 during the previous year. This favourable result is due to the fact that no expenditure was incurred during the year under review in burning of fire lines. The villagers were induced to burn fire lines free of cost in return for the grass they were asked to cut from the guide lines.

Grazing.

15. Owing to bad rains of 1888 and the consequent scarcity of fodder, nearly all the Forest Reserves had to be thrown open for grazing. In all 14,684 head of cattle were allowed to graze in the Forest Reserves. Of these 14,354 were admitted on payment, as against 16,292 during the previous year, and 330 were admitted free. Besides these the cattle of certain villages were admitted free of cost. As prescribed in paragraph 6 of the Government of India review on the report for the last year, a statement showing areas closed and open for grazing, as well as the number of cattle admitted, is given in the Sub-Assistant Conservator's Report.

Grass-cutting.

16. The number of permits issued to the right-holders for cutting grass was the same as that of the last year. The total value of grass removed by the right-holders from the Forest Reserves was estimated at R82,416. Wood also, of an estimated value of R131, was supplied to right-holders and others free of cost for household and agricultural purposes.

17. The Commissariat Department at Nusseerabad was supplied with grass from the Forest Reserves of the value of R2,700. This amount was charged to that Department, but was subsequently written back under instructions from the Comptroller and Auditor General of Accounts, Forest Branch. The matter, however, has been referred to the Government of India, and its orders on the subject are awaited.

Natural Reproduction.

18. This subject also appears to have been properly attended to during the year under review. The result has not been as satisfactory as could be desired, which is attributed to the excessive grazing to which the forests of Ajmere and Merwara are yearly subjected; but until the Forest Reserves are very greatly increased in extent and capacity, it will not be prudent to limit grazing to the extent desired for this object.

Coppicing.

19. The results of reproduction by coppicing are satisfactory. The shoots of Ber, Dhak, and Khejra are reported to have attained the heights of 17, 12, and 12 feet, respectively, in six years. The general appearance of the pattern areas is said to have been much improved since they were closed. Natural seedlings are coming up under the parental trees, and the Sub-Assistant Conservator entertains hopes of their surviving, as these areas are altogether excluded from grazing.

Artificial Reproduction.

20. This subject also was well looked after. Various kinds of seeds are reported to have been sown in various blocks. The germination was good, but the seedlings in some cases suffered greatly from drought.

21. Bamboo seed received from the Central Provinces, which was sown in the Bir Nursery, is reported to have germinated very well. At present there are 1,000 plants which are reported to be doing well. It is to be regretted that the plantation of Busrah date-palms did not succeed. The total expenditure on sowing and planting is reported to have amounted to R728, or R153 less than in the preceding year.

22. Full details as regards artificial and natural reproduction are given in the Sub-Assistant Conservator's Report, as directed by the Government of India.

23. The total outturn of fuel was 185,900 cubic feet, as against 227,480 cubic feet during the previous year. Of this 208 cubic feet was removed by Departmental Agency, and the rest sold to purchasers. The amount realised from the sale of minor Forest produce was R2,679, as against R4,204 during the previous year. The estimate of free grants is also given, which shows that the estimate of the year under report has largely exceeded that of the previous year.

Financial Results.

24. The financial results of the year under report, as compared with those of the previous year, are shown below :—

	1888-89.	1889-90.	Difference.
	R	R	R
Receipts	13,574	11,592	−1,982
Expenditure	15,676	12,701	−2,975
DEFICIT .	2,102	1,109	−993

25. The revenue of the year under report was less by R1,982 than that of the previous year, and the expenditure by R2,975. The deficit, therefore, came down from R2,102 to R1,109. If the value of the grass supplied to the Military Department at Nusseerabad, namely, R2,700, were included in the above account, as it most certainly ought to be, the receipts of the year under report will show an excess of R718 over those of the previous year, and there would be a surplus of R1,591, instead of deficit.

General Remarks.

26. The Government of India in their orders on the last year's report pointed out some discrepancies in the Sub-Assistant Conservator's Report. The attention of the Assistant Conservator was duly invited to them. The necessary explanation has been given in the present report.

27. On the whole, the report shows satisfactory progress, and exhibits in a clear form all the details that are necessary. Much credit is due to Mr. Heera Singh for the work he has done. The Chief Commissioner is glad to see also that Babu Nand Mul, the forester, has earned commendation.

ORDERS.

28. Ordered that a copy of this Resolution, together with the original report and statements, be forwarded to the Government of India in the Revenue and Agricultural Department under cover of a separate letter.

29. Ordered also that a copy of the above Resolution be forwarded to the Commissioner of Ajmere and Merwara for information and guidance and favour of communication to the Sub-Assistant Conservator of Forests.

Memorandum by COLONEL J. BIDDULPH, S.C., *Commissioner of Ajmere-Merwara, on the Report of the Forest Administration in Ajmere-Merwara for the year 1889-90.*

Areas and Boundaries.

The areas of the Ajmere-Merwara Forest Reserves, amounting to 139 square miles, or 89,264 acres, underwent no change during the year under review as detailed below :—

	Acres.
Khalsa	84,493
Jagir	4,093
Istimrar	678
TOTAL	89,264

2. Ten new boundary pillars were erected and the old ones repaired.

Village Reserves.

3. Six new village Reserves, with an area of about 4,000 acres, were reserved in the villages of Chachiawas, Srinagar, Saradna, Bagri, Kotkirana and Dadola during the year.

4. The Makhupura Reserve declared by decree of a Civil Court to be the property of the Jagirdar was also resumed on the same conditions on which it was first formed.

The total area of village Birs now under the management of the Forest Department is detailed below :—

		Area in acres.	
Ajmere	Sedria Perbutpura	400	
	Makhupura	440	
	Saradna	395	Formed during the year.
	Chachiawas	1,000	
	Srinagar	1,600	
Merwara	Bagri	400	
	Kotkirana	800	
	Dadola	200	
	TOTAL	5,235	

5. The management of village Reserves by the Forest Department by declaring them State Forests, as suggested in paragraph 2 of letter No. 426 F., dated 17th May 1889, from the Government of India in the Revenue and Agricultural Department will, in the present state of the country, not be feasible for some years to come. A Draft Bill relating to Private Forests and Mountain Land Preservation is before the Government of India and its passing into law is awaited.

Fencing.

	R	a.	p
*Ajmere . .	57	6	0
Merwara . .	17	4	0
TOTAL .	74	10	0

6. No new fencing was constructed during the year under review. The total expenditure incurred in executing repairs to old fencing amounted to R74-10.*

General Protection and Breaches of Forest Rules.

7 The number of cases fell from 56 to 31. Convictions were obtained in all cases but one. Of the total cases brought to trial, 71 per cent. were for illicit wood or grass-cutting and the rest for injury by fire, grazing and other offences. No case was sent up to a magistrate in the Ajmere District. Out of 50 persons involved in the 31 cases, 48 were convicted, against 104 out of 107 persons brought to trial in the year 1888-89

8. The Sub-Assistant Conservator of Forests compounded 205 cases involving 367 persons. The decrease both in the number of cases brought to trial before the magistrate and those compounded is mainly due to the fact that very petty offences were disposed of by confiscation of the implements.

9. Receipts from fines and forfeitures, including amounts realized by way of compensation, amounted to R361-11-2, against R418-13-10 in the preceding year.

10. The number of cattle impounded in the forest tracts increased from 3,868 to 4,197. Receipts from half the Pound Fund fines amounted to R416 against R433. This decrease is due to the fact that more goats and sheep and less cows and buffaloes were impounded during the year.

Fire Protection.

11. It is satisfactory to note that only two insignificant fires occurred during the year damaging an area of 7 acres. There were five fires in the preceding year by which an area of 466 acres was destroyed. The damage done in both instances was slight.

12. No new fire lines were burnt during the year; the old fire lines were thoroughly burnt.

Area protected by the adoption of special measures was 79,419 acres and the area protected by the ordinary establishment was 9,838 acres.

The total expenditure incurred on fire protection amounted to R219, against R596 in 1888-89.

Grazing and Fodder Grass.

13. Almost all the Forest Reserves were opened to grazing from 1st March to the end of June. Owing to scarcity of fodder, 14,354 cattle were admitted to graze in the forest tracts on payment, against 16,292 last year; 330 cattle were allowed to graze free of charge; besides an area of 1,117 acres was set apart in the Srinagar and Amner blocks for grazing free of dues for eight months during the year. Nine hundred and fifteen cattle belonging to hamlets situated within the Forest Reserves were allowed to graze free of dues all the year round.

14. The number of tickets issued to the right-holders for free cutting of grass remained the same as in the preceding year. Grass of an estimated value of R82,416 was removed from the forests by right-holders and by those who had the advantage of free grants.

15. Wood of an estimated value of R131 was supplied to right-holders and others free for household and agricultural purposes.

16. The Commissariat Department, Nusecrabad, was supplied with grass to the value of R2,700. The amount was charged to that Department, but was subsequently written back under the instructions from the Comptroller and Auditor General of Forest Accounts, Calcutta, on the ground that the Military Department in the Central Provinces gets its supply of grass free from the Forest Department. The forests in the Ajmere and Merwara District are not like the forests of the Central Provinces the absolute property of the Government, but the people have certain rights in them, principally the right to receive two-thirds of the net profits resulting from forest management. The Forest Department of these districts cannot, under the circumstances, afford to supply free grass to the Military Department. The matter has been referred to the Chief Commissioner with a view to obtain sanction of the Government of India to the payment by the Military Department for the supply of grass made to it from the Ajmere forests. Steps have been taken to avoid such complications in the Forest accounts in future.

Natural and Artificial Reproduction.

17. Natural reproduction of nearly every species, chiefly Dhak, Kumta, Arinja, and Khejra was even better than last year in the forests of Ajmere. In Merwara Reserves, however, owing to comparatively poor rainfall, the seedlings had to contend against drought and died off in large numbers. On the whole the results of natural reproduction from self-sown seed in the Ajmere-Merwara forests have not been so good as could be desired. Various kinds of seeds were sown broadcast in various blocks, both in Ajmere and Merwara. The germination was good, but the seedlings subsequently died off in large numbers owing to insufficient rainfall.

18. Bamboo seed received from the Central Provinces was sown in the Bir Nursery. The seed very successfully germinated. At present there are 1,000 plants 6 inches to one foot in height. They are reported to be doing well.

19. Out of sixteen Busrah date offsets mentioned in the last year's report, only three are said to be alive in the Pushkar Nursery, and they are not in a healthy condition. Plants of various kinds, both exotic and indigenous, were put out in different tracts, but owing to insufficiency of water in wells, failed in large numbers.

20. The total expenditure on sowing and planting amounted to R729, being R153 less than in the preceding year.

Communications and Buildings.

21. No expenditure was incurred in repairing roads and bridges during the year.

22. Three new *chowkis* were constructed for Forest guards in the Merwara District, at a total cost of R47. The total expenditure under this head amounted to R341, against R354 in the preceding year.

Meteorological Observations.

23. The same observations were continued as in the preceding year. More rain fell inside forests than outside, the largest increase being 7·69 and the smallest ·31 inches.

24. The average spring level of the wells in Danta and Rajgurh Reserves measured in 1889 was less than that registered in the preceding year, owing to comparatively less rainfall.

There was more water in Mohwabir wells than last year. Other meteorological observations call for no special remarks.

Financial Results.

25. The financial results compare as follow with those of the two previous years :—

	1887-88.	1888-89.	1889-90.
	R	R	R
Receipts	14,293	13,573	11,592
Expenditure	18,898	15,676	12,701
DEFICIT . . .	4,605	2,103	1,109

The chief sources of revenue were :—

	R
1. Firewood and charcoal	5,613
2. Grazing and fodder grass	4,177

There was an increase of R149 under the first head, while there was a decrease of R1,597 under the latter, which is due to the fact that a sum of R2,700 on account of value of grass supplied to the Military Department was written back. The Forest Management is entitled to take credit for this. There was a decrease of R1,981 in the total receipts of the year as compared with 1888-89. If the amount of R2,700 mentioned above be added to the receipts, the total revenue of the Division would show a surplus of R1,591. The total expenditure exhibits a decrease of R2,975. There was a saving under all important heads, the chief saving being caused by the decrease in the Forest officer's pay consequent on a change of officers.

General Remarks.

26. The rains in Ajmere were in excess of last year. They commenced early and benefited the fodder.

In Merwara the average rainfall diminished by about 4 inches.

27. Mr. Barrett, the Assistant Conservator of Forests, was transferred to the Punjab on 1st September 1889. Mr. Hira Singh, Sub-Assistant Conservator of Forests, succeeded him and has worked well and zealously since taking up the appointment. His success in inducing villagers to form village reserves is especially deserving of notice. His pay when he first joined was R150, but was subsequently raised to R200. Forest Ranger Babu Nand Mal, in charge of the Todgurh Range, was promoted to the 3rd grade during the year.

The post of second munshi of the Forest Office was abolished during the year.

28. In January 1890 the Forest students under Mr. E. E. Fernandez, Deputy Director of the Imperial Forest School, Dehra Dun, paid a visit to Ajmere. The students inspected forests round Ajmere.

An extract from the remarks made by Mr. Fernandez is given below :—

I could not but be struck with the rapid progress made by Sirdar Hira Singh in the taking up and conservation of village waste lands. This rapid progress proves that he possesses all the tact and other qualities necessary to gain him the confidence of the people without which forest conservancy, whether in State or village or private land, can only be a sham and a delusion. The arrangements made by which a regulated usufruct of the area is enjoyed by the village community are judicious.

In the matter of fire conservancy, I am glad to see that Sirdar Hira Singh has for the first time had all his traces cleared by the middle of January. In the joint report I wrote with Mr. McAmoir in 1881, I laid stress on the necessity of having the traces ready as early as possible, as the grass becomes thoroughly inflammable early in the cold weather. I have also noticed with satisfaction that the traces are now cleared without any expense to the State. Sirdar Hira Singh having hit upon the ingenious expedient of utilizing all the good grass before the rest is set fire to, the workmen are glad to accept this grass in lieu of wages. This excellent arrangement gave the public exchequer R700 a year.

In the matter of general protection I may say that in our wanderings we did not see a single instance of infringement of the Forest Rules. The establishment seemed thoroughly in hand and the population ready to help the establishment. This speaks the highest praise for the officer in charge.

29. As last year was the first year since Forest Conservancy was undertaken in Ajmere-Merwara, in which the receipts have exceeded the expenditure, a table is appended showing the financial results of forest operations from the beginning.

Statement showing the Revenue and Expenditure of the Forest Department in Ajmere-Merwara from the beginning of the Forest Conservancy (see paragraph 29).

Revenue.	1872-73	1873-74.	1874-75.	1875-76.	1876-77.	1877-78.	1878-79.	1879-80.	1880-81.	1881-82.	1882-83.	1883-84.	1884-85.	1885-86.	1886-87.	1887-88.	1888 89.	1889-90.
	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Firewood and charcoal . .	Details not available.	Details not available.	Details not available.	57	61	202	242	660	324	660	2,472	2,420	4,043	4,809	5,389	5,359	5,464	5,627
Bamboos and timber . .				...	59	...	15	3	...	...	66	2	64	86	199	154	402	371
Grazing and fodder grass .				11	257	1,227	165	201	197	1,750	3,721	4,563	5,267	3,053	4,206	7,524	5,774	4,177
Minor produce . . .				26	155	107	197	212	92	175	243	656	470	983	685	319	744	377
Fines and forfeitures . .				208	250	1,462	613	733	511	1,433	598	498	524	724	627	600	852	778
Miscellaneous . . .				108	123	4	9	52	...	48	26	59	88	42	169	337	337	262
TOTAL .	24	508	203	410	905	3,002	1,241	1,861	1,124	4,066	7,126	8,198	10,456	9,697	11,275	14,293	13,573	11,592(a) + 2,700
Expenditure.																		14,292
Conservancy and works . .	4,878	15,777	17,753	12,963	11,433	6,961	5,182	5,280	4,755	5,631	3,689	4,100	5,174	4,210	8,281	5,887	2,932	1,444
Establishment . . .	8,177	8,563	8,813	14,383	11,025	7,965	8,263	8,470	7,668	8,323	7,595	10,474	11,142	12,259	12,463	13,011	12,744	11,257
TOTAL .	13,055	24,340	26,566	27,346	22,458	14,926	13,445	13,750	12,423	13,954	11,284	14,574	16,316	16,469	20,744	18,898	15,676	12,701
Surplus.	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1,591 If R2,700 are added.
Deficit	13,031	23,832	26,363	26,936	21,553	11,924	12,204	11,889	11,299	9,888	4,158	6,376	5,860	6,772	9,469	4,605	2,103	1,109 If R2,700 are written back.
Estimated value of forest produce received by right-holders.	...	...	...	...	...	...	...	...	...	...	...	...	...	47,500(b)	...	47,832	68,464	80,475
Number of cattle grazed free in forest.	...	...	...	...	...	...	...	...	...	197	197	...	...	330(c)	1,183(d)	1,245(e)	1,245	330(f)

(a) This sum has been written back according to Comptroller and Auditor General's (Forest) directions.
(b) Value of grass only; value of bullies and dandas supplied to right-holders is not given in Forest Officer's report.
(c) These cattle were allowed to graze free in Rajgurh block only.
(d) Number of cattle allowed to graze free in Srinagar block is not given.
(e) " " " Amner and Srinagar blocks is not given.
(f) " " " " " "

Progress Report of Forest Administration in Ajmere-Merwara for the year 1889-90, by Mr. Hira Singh, *Sub-Assistant Conservator of Forests.*

Introduction.

1. On 1st September 1889, Mr. Barrett, Assistant Conservator of Forests, was re-transferred to the Punjab and was succeeded by Mr. Hira Singh, Sub-Assistant Conservator of Forests, who held charge of the Division from that date.

Visit of the Forest School to Ajmere.

2. In January 1890 the Forest students, under Mr. E. E. Fernandez, Deputy Director of the Imperial Forest School, Dehra-Dun, paid a visit to Ajmere. The students inspected forests round Ajmere and took down notes of the progress observed in the natural vegetation of these hilly tracts since forest conservancy was first started in Ajmere-Merwara, the works of improvement from time to time executed by Forest Officers, and the experiments kept up to determine the advantages expected from the protection of the reserves.

Addendum to Forest Regulation, Ajmere.

3. Rule II (3) of the Forest Byelaws prevented a Divisional Officer below the rank of an Assistant Conservator from compounding forest offences. An amendment to the rule was made by the Local Government, which confers such powers on any Forest Officer in charge of the Division.

Register of Rights.

4. Certain omission, affecting the rights of villagers in the "Register of Claims to Land or Rights to Forest-produce" were brought to the notice of the Commissioner and Conservator of Forests. The register is being accordingly revised, which, when completed, will be re-submitted for the sanction of Government in due course.

Village Reserves.

5. The subject of village Reserves received due attention. As many as six Reserves, with an aggregate area of about 4,000 acres, were added. The total area under the management of the Forest Department now amounts to 5,235 acres.

Fire protection.

6. Fire protection was more successful during the year, only two insignificant fires burning over an area of 7 acres having occurred, against 466 acres burnt last year.

Rainfall.

7. More rain fell in Ajmere than in Merwara. To this fact may be attributed the large success in the cultural operations undertaken in Ajmere during the year.

Cost of burning Fire Lines.

8. An attempt was for the first time successfully made to get villagers to burn fire lines free of cost in return for the grass they were allowed to cut from the guide lines which used to be formerly set fire to. This arrangement will save the public exchequer R428 every year.

Supply of grass to the Military Department.

9. The Commissariat Department, Nusseerabad, was supplied with grass to the value of R2,700. The amount was charged to that Department, but was subsequently written back under instructions from the Comptroller and Auditor General of Forest Accounts, Calcutta, on the ground that the Military Department in the Central Provinces gets its supply of grass free from the Forest Department. These forests are not, like the forests of the Central Provinces, the absolute property of the Government, but the people have certain rights in them, principally the right to receive two-thirds of the net profits resulting from Forest Management.

The Forest Department cannot, under the circumstances, afford to supply free grass to the Military Department. The matter has been referred to the Conservator.

Revenue and Expenditure.

10. The revenue of the Division was R11,592 and the expenditure R12,701, further reducing the last year's deficit by R993. If the amount of R2,700 mentioned above be added to the receipts, the total revenue of the Division would show a surplus of R1,591.

Discrepancies noticed in the Ajmere Forest Administration Report for 1888-89 and mentioned in the Government of India's Review on that Report.

11. In Form No. 51 under "Nurseries" the Ajmere and Beawar Nurseries, of 10 and 4 acres, respectively, were omitted by an oversight. The nurseries were abandoned and so the areas should have been shown in the column "Excluded."

The information required in paragraphs 6 and 8 of the Review and paragraphs 3 to 6 of the statement of discrepencies attached thereto, is given in the present report.

The area cut over for felling and given in paragraphs 70 and 72 of the Annual Report is correct.

CHAPTER I.

Area and Boundaries.

1.—Area.

Areas taken up under the Ajmere Forest Regulation, 1874.

12. There was no change in the areas of the Reserved Forests. The total area = 139 square miles remained the same as last year.

This area is, however, subject to correction for—

(1) It includes all cultivated patches within forest limits, the area of which should be deducted from the area shown in Form No. 49. The precise figures under this head are not yet available. The corrections will be supplied in the next report.

(2) The boundary of some of the forests has not been correctly plotted on the 4-inch skeleton maps.

Other Areas.

13. Besides the areas shown in Form No. 49, the following areas not brought under the Ajmere Forest Regulation are managed by the Forest Department :—

	Acres.
(1) Areas taken up for plantation purposes :—	
Shikast masjid	26
Beawar Parade Plantation	8
Nurseries	5
(2) Village Birs (managed for the villagers on certain conditions)	5,235
Total	5,274

Village Birs.

14. Five new village Reserves with an area of 4,000 acres were reserved during the year. The village Bir of Makhupura, restored to the Jagirdar by a decree of the Court last year, was also resumed by the Forest Department on the same conditions on which it was first formed.

The following is a complete list of the village Birs under the management of the Forest Department :—

		Area in acres.	
Ajmere	Sedria-Parbatpura	400	
	Saradna	395	
	Makhupura	440	
	Chachiawas	1,000	Taken up during the year under report.
	Srinagar	1,600	
Merwara	Bagri	400	
	Kot-Kirana	800	
	Dadola	200	
		5,235	

The management of such areas by the Forest Department by declaring them State forests under the Ajmere Forest Regulation for a certain number of years, as suggested in paragraph 2 of the Government of India's Review of the Annual Progress Report for 1887-88, is, in the present state of the country, not feasible. A Draft Bill relating to "Private Forests and Mountain Land Preservation" is before the Government of India, and its passing into law may be awaited.

2.—Boundaries.

Boundary pillars.

15. Ten pillars were erected round the sowings of previous years in the Srinagar Block. Boundary pillars of Chang and Beliawas were whitewashed and re-numbered with coal tar. All other pillars were kept in repair.

CHAPTER II.

Surveys, Working Plans and Annual Plans of Operations.

(i).—Surveys.

16. The boundaries of some of the forests were checked with 4-inch forest maps, and omissions of pillars were noted. These will be surveyed and plotted on the maps next year.

(ii).— Working Plans.

17. Forest Conservancy has been started in Marwar and probably in Meywar. This is an indirect gain to the forests of Ajmere-Merwara, inasmuch as contractors would not now be able to draw their supplies of fuel and other forests produce so cheap from those forests as before. The subject of a working plan for Ajmere-Merwara forests has been earnestly taken up and the necessary data are being collected.

(iii).—Annual Plans of Operations.

18. With a few exceptions, all the works proposed in the Annual Plan of operations drawn up for the year were carried out.

These exceptions were :—

(1) Decrease in the area of the fuel-cuttings owing to the unexpected falling off of demand for fuel.

(2) Construction of one more forest *chowki* at Rajwa, in addition to the two *chowkis* at Amner and Oondabari proposed to be built during the year.

CHAPTER III.

PROTECTION AND IMPROVEMENT.

1.—Establishment.

Executive and Protective Staff.

19. Forest Ranger Babu Nand Mal, in charge of the Todgarh Range, maintains an excellent reputation, and was promoted to the 3rd grade during the year. Every fresh year's experience increases his value, and he has fully justified his advancement in grade. The staff of Foresters and Forest guards worked up to the mark. One Forest guard was prosecuted under section 161 of the Indian Penal Code, and sentenced to pay a fine of R10 and to undergo eight months' rigorous imprisonment for releasing cattle which should have been lawfully impounded.

Office Establishment.

20. The office establishment worked satisfactorily, Babu Ausaf Ali doing particularly well. The post of the second munshi was abolished during the year.

2.—General Protection and Breaches of Forest Rules.

Cases tried by Magistrates

21. The following statement gives the classification of forest offences tried by Magistrates during the year:—

Description.	No. of Offences.		Difference.
	1888-89.	1889-90.	
1. Injury to forests by fire	4	2	−2
2. Illicit wood or grass-cutting	43	22	−21
3. Grazing without permission	7	4	−3
4. Other offences	2	3	+1
Total	56	31	−25
Convictions	56	30	...

Note.—"Other offences" include the following:—

Refusing to render aid in extinguishing forest fire	1
Breaking up waste land for cultivation	2
	3

Cases compounded.

22. The number of cases compounded by the Forest Officer in charge of the Division under the Forest Regulation also shows a decrease over the previous year. The following statement compares the results of the two years:—

Year.	Cases compounded.		Average per case.	Average per man.
	No.	Amount of compensation.		
		R	R a. p.	R a. p.
1888-89	230	361	1 9 0	0 12 9
1889-90	205	342	1 10 8	0 14 11
Difference	−25	−19	+0 1 8	+0 2 2

The total decrease both in the number of cases taken into Court and those compounded is partly due to a slight heavier compensation awarded, and partly to the fact that very petty offences were disposed of by the confiscation of the implements used in committing them.

Cases prosecuted under other Acts.

23. Two cases affecting five persons of forcibly opposing the seizure of cattle impounded from Government Forest Reserves were challaned under the Cattle Trespass Act. The offenders were fined R14 and R13 respectively.

Cattle Trespass.

24. The number of cattle impounded for trespass is shown below :—

Year.	Description of cattle.				Total.
	Cows.	Buffaloes.	Goats and sheep.	Others.	
1889-90	2,221	301	1,604	71	4,197
	2,522		1,675		
1888-89	2,683		1,185		3,868
Difference .	—161		+490		+329

While there was an increase of 329 in the total number of cattle impounded, the pound receipts fell from R433 to R416. This may be explained by the fact that more goats and sheep and less cows and buffaloes were impounded during the year.

3.—*Forest Fires.*

25. The results of fire conservancy are given below :—

		Acres.
Area successfully protected.	(1) By the adoption of special measures . . .	79,419
	(2) By the ordinary establishment . . .	9,838
Area burnt		7
	Total area attempted to be protected .	89,264

The total cost of fire protection from 1st July 1889 to 30th June 1890 was R219 or ·53 pies per acre, which was ·87 pies per acre less than the previous year.

The reduced cost of fire protection is due to the fact that no expenditure was incurred for the burning of fire-lines for reasons explained in paragraph 8.

Two fires burning 7 acres of forest occurred during the year. The one in the Todgarh block was put out before it was allowed to spread. The other of less than an acre in Dilwara Bir hardly deserves any mention. Both were due to incendiarism. The offenders were traced and sent up for trial. They were fined R5 and R1 respectively. The damage done in both these cases was slight, grass being chiefly burnt.

All the fire traces were thoroughly burnt and the work of burning completed by the middle of January before violent winds begin to blow. Alterations in the fire line proposed in last year's report were also carried out during the year. All these precautions account for the year's success in fire conservancy.

4.—*Grazing and Fencing.*

Grazing.

26. Owing to the bad rains of 1888 and the consequent scarcity of fodder, nearly all the Forest Reserves were thrown open to grazing from 1st March to the end of June. The

following statement shows the area open and closed to grazing and the number of cattle admitted either free or on payment of the prescribed fees:—

District.	Area closed to grazing	Area open to grazing.	Cattle.			Total	Acreage per head
			Right-holders'.	Outsiders	Free.		
	Acres	Acres.	No.	No.	No.	No.	Acres
Ajmere . . .	1,226	16,444	3,316	12	330	3,658	4·49
Merwara . .	...	71,594	9,672	1,354	...	11,026	6·19
Total .	1,226	88,038	12,988	1,366	330	14,684	5 99

The following cattle were also allowed to graze, free of dues, during the year :—

	Block	Area	No. of cattle.	
For eight months, *viz.*, 1st November to end of June.	Srinagar .	817 acres .		Cattle of Srinagar village.
	Amner .	300 „ .		Ajeetgur and Amner villages.
All the year round .	Todgarh .	1,100 „ .	783	Cattle of the hamlets situated within forest limits.
	Banjari-Mandlan	200 „ .	70	
	Behawas .	* .	42	
	Sheopura .	* .	20	

27. No new fencing was constructed during the year. Certain repairs to fencing were executed and the following statement gives the lengths of these repairs :—

Fencing.

Forest.	Stone.	Thor.	Trenching.
	R. ft	R. ft.	R. ft.
Chang		4,600	
Mohwabir and Madar Hill	1,200	3,000	...
Makerwali Hokran	..	...	1,650
Total . .	1,200	7,600	1,650

The total cost of repairs amounted to R 74-10.

5.—*Natural Reproduction.*

28. In the forests of Ajmere, natural reproduction of nearly every species, chiefly Dhak, Kumta, Aringa and Khejra was even better than last year. In Merwara, however, owing to comparatively poor rainfall the seedlings had to contend against drought and died off in large numbers.

Reproduction from self-sown seed.

On the whole natural reproduction from self-sown seed in Ajmere-Merwara forests has not given such good results as could be desired. The progress made has been very slow on account of the excessive grazing to which the forests are from year to year exposed, and unless the strict exclusion of cattle from all the newly-acquired tracts in which forest growth has not yet sufficiently advanced to admit of grazing is insisted upon, no good results can be expected.

*Areas not fixed under the Register of Rights

29. Reproduction by coppice shoots is very satisfactory in the areas felled for coppice. The following statement shows the average results of the heights of some of the coppice shoots in the coupes exploited at different times :—

Reproduction by Coppice Shoots.

	One year old shoot.	Two years.	Three years.	Four years	Five years.	Six years.
	Feet.	Feet.	Feet.	Feet.	Feet.	Feet.
Ber	5	8	12	15	16	17
Dhâk	4½	6	8	10	11	12
Dhankra	2	3	4	5	7	8
Khejra	4	6	7	9	10	12
Jinjha	4	5	6	7	8	9

30. The general appearance of these areas has much improved since they were closed. Natural seedlings are everywhere coming up under the parent trees, and it is hoped they will survive as grazing is entirely excluded, and the grass left uncut affords them some protection against excessive heat and winter cold.

Pattern Areas.

6.—*Artificial Reproduction.*

31. The principal cultural operations undertaken during the year included :—

Sowing	35 acres.
Transplanting	608 pits.
Replanting old blanks	345 ,,

The total cost of sowing and planting was R729, including the maintenance of nurseries.

Sowings.

32. Nim seed was dibbled in an area of 5 acres under the shelter of *Euphorbia* bushes. The seedlings are coming on well everywhere.

Mohwabir Block.

Khair, Aringa and Babul seeds were mixed together and sown broadcast in an area of 10 acres. About 60 per cent. of the seedling are doing well.

Srinagar Block.

Khejra, Aringa and Khair seed was sown in an area of 5 acres round the edge of sand mounds 2 feet high, 2½ feet in diameter at the base 1 foot apart. Fifty per cent. of the mounds show from 10 to 12 seedlings alive.

Makerwali-Hokran Block.

An area of 15 acres was sown with Khair seed collected by Forest guards in Merwara in patches 5 feet apart. Only 35 per cent. of the patches show from two to three seedlings alive. The large percentage of failures is due to insufficient rainfall at Kotra.

Kotra Block.

33. *Planting.*—Fifty Sandal plants were put out behind the Mirshah Ali garden under the shade of other trees. Eight plants have died; the rest are doing well. Sandal seems to thrive best under cover.

Madar Hill.

Two hundred and seventy-two Shishum, 103 Siris, 28 Bahara, 40 Pine and 45 Cheril plants, 2 feet to 3 feet high were planted, 15 feet apart, along the Khandakua-Bir Road. Owing to the insufficiency of water in wells, the watering of the plants was greatly interrupted and only 70 per cent. of the plants survived.

Danta Block.

Makerwali-Hokran Block.

Three hundred and forty-five plants of different sorts were put out to fill up last year's blanks.

Chang Block.

Forty-four Shishum, 20 Grevillia, and 6 Aritha plants, one year old, were transplanted in selected localities, where they could be regularly watered. The plants died off on account of wells having completely dried up.

7.—*Nurseries and Exotics.*

34. *Nurseries.*—The Ajmere and Beawar Nurseries abandoned last year were leased out for cultivation for R33 and R45 respectively. Grass to the value of R25 was also sold from the Ajmere Nursery.

The Nurseries at Pushkar and Bir in Ajmere and Sendra in Merwara were kept up for forest and experimental purposes.

Bamboo.

Exotics.—Bamboo seed received from the Central Provinces was sown in the Bir Nursery. The seeds very successfully germinated. At present there are 1,000 plants, 6 inches to 1 foot in height. They are doing well.

Date Plants.

Out of 16 Busrah date plants put out in the Pushkar Nursery and mentioned in the last year's report, only three have survived. These too are not in a healthy condition.

The following exotics are ready for transplanting in each of the three nurseries :—

	Pushkar.	Bir.	Sendra.	Total.
Eucalyptus	53	...	23	76
Pine	...	...	50	50
Grevillia and Robusta . .	20	...	44	64
Sandal	49	...	...	49
Shishum	1,002	700	300	2,002
Date	.	10	40	50
Mulberry	185	...	...	185
TOTAL .	1,309	710	457	2,476

35. *Fruit Trees.*—There are 100 plantains in the Pushkar, and 205 in the Bir, and 25 guava plants in the Bir Nursery.

36. *Other Plants.*—Besides the above, the Pushkar Nursery has 1,500 Forest plants, the Bir Nursery 800 plants and the Sendra Nursery 2,500 plants, fit for distribution or planting in forests.

8.—*Communication and Buildings.*

37. The total cost under this head is given below :—

	R
(*a*) Roads and Bridges	*Nil.*
(*b*) Buildings	94
(*c*) Other works (meteorological experiments)	247
TOTAL .	341

38. *Buildings.*—Three new *chowkis* were made for Forest guards at Amner, Undabari, and Ragwa, all in Merwara, at a total cost of R47. Other *chowkis* were kept in repair.

39. *Other Works.*—Rupees 247 spent under this head includes the pay of two observers at Ajmere and Raoli Meteorological Observatories.

CHAPTER IV.

METEOROLOGICAL OBSERVATIONS AND OTHER EXPERIMENTS.

1.—Rainfall.

40. Appendix A shows the rainfall at various stations registered under Forest supervision for the calendar year 1889. The following table shows the rainfall for the same year registered at the principal police stations in Merwara :—

	Inches.
Beawar	18·90
Jawaja	19·87
Jushakhera	16·60
Todgarh	13·30
Dewair	15·98

The highest and least rainfall in each district may be thus compared :—

	Maximum.	Minimum.
Ajmere	27·45	14·71
Merwara	19·87	13·3

Thus more rain fell in Ajmere than in Merwara during the year.

The following table compiled from the returns for the last six years will be interesting as showing the average annual increase in the fall of rain in favour of the forests :—

Forest.	Years.					Total.	Average annual increase.	Remarks.
	1885.	1886.	1887.	1888.	1889.			
Nagpahar	+3·43	+4·26	+9·18	+6·68	+7·69	+31·24	+6·25	Note.—
Mohwabir	+1·85	+1·90	+1·51	+5·07	+1·42	+11·75	+2·35	+ in favour of forests.
Rajgarh	...	+·96	+·38	+·09	+·31	+1·74	+·44	
Dilwarabir	+1·24	+1·56	+3·10	+1·88	+·93	+8·71	+1·74	− against forest.
Jaspalan	...	...	+·67	−·01	+1·97	+2·63	+·88	
Danta	...	+3·60	−·52	+·12	+·31	+3·51	+·88	

2.—Temperature and Humidity.

41. The meteorological readings of the double stations at the Ajmere Nursery and the Mohwabir and Jaspalan Observatories were taken as usual. The results of the readings are given in Appendices B, C, and D.

3.—Water Level in Wells.

42. The results of these experiments for Mohwabir, Danta, and Rajgarh Reserves are given in Appendices E, F, and G.

Mohwabir Series.

In well No. 1 there was 22 feet more water than last year. Wells Nos. 2 and 3 showed an average increase of 3 feet. From 1st March to 12th July, the dates on which the measurements were stopped, there was a rainfall of 5·89 inches. Well No. 1 was not all used for irrigation during the year.

Danta Series.

Wells Nos. 3 and 4 inside, and Popsing well No. 3 outside, the forest dried up during the year. Although 5·02 inches of rain fell from 1st March to 2nd July, wells Nos. 1 and 2 showed an average decrease of 4 feet owing to the total rainfall in the Danta Block being about 6 inches less than the previous year.

Rajgarh Series.

Well No. 1 had an average of 2 feet less water during the time of measurement than for the same time during 1885.

Water Supply in Tanks.

43. Figures for the storage of rain water in Danta tank could not be obtained from the Engineering Department, Military Works, in time for this report. They will, however, be supplied in the next year's report.

CHAPTER V.

YIELD AND WORKING.

Summary of Produce removed from the Forests.

Timber and Fuel (Form No 54).

44. The following statement shows the quantity in cubic feet of timber and firewood removed during the year as compared with that removed during the previous year :—

	Timber		Firewood.	
	1888 89.	1889-90.	1888-89	1889-90.
	C. ft.	C. ft.	C. ft.	C. ft.
Removed by departmental agency .	...	...	21,300	208
" by purchasers . . .	Figures not available.	3,474	2,06,180	1,85,692
" by free grant . . .		2,145	...	..
TOTAL .	...	5,619	2,27,480	1,85,900

Minor Produce (Form No 55).

The value of the minor produce removed in the two years compares as follows :—

	1888 89	1889-90	REMARKS.
	R	R	
Removed by Government Agency .	176	...	(a) Includes R274 from sale of bamboos, and R209, grazing dues, Dowair Pass (c) Grazing revenue. — Not shown in last year's return.
" purchasers . .	4,204(a)	2,679	
" free grants . .	67,083(b)	80,344	
" right-holders . .	2,412(c)	2,072	(b) Erroneously shown in column "Right-holders" last year.
TOTAL .	73,875	85,095	

(*i*) *Departmental Operations.*

45. Thirteen maunds of charcoal were made in the Chang Block and sold for R14. The cost of making the charcoal was R5. No other departmental operations were undertaken during the year.

(*ii*) *Removal of Produce by Purchasers.*

Timber

46. Five thousand four hundred and eighty-five dandas, 200 kamris, 28 bullies, 42 bundles of firangun and 139 miscellaneous pieces were sold from the Merwara forests for household purposes. The amount realized was R174.

Fuel.

47. One lakh and six hundred and twelve cubic feet of green and 85,080 cubic feet of dry firewood were sold for R5,613.

(*a*) *Greenwood.*—The following areas of standing wood were cut for coppice and the wood removed by purchasers :—

	Forests.	Area.	Quantity.	Amounts realized.	Remarks.
		Acres.	C. ft.	R	
Ajmere	Mahwabir and Madar Hill	20	3,000	145	
	Nagpahar	35	7,000	340	
Merwara.	Chang	123	36,875	1,500	
	Todgarh	161	53,737	1,500	
	Total	339	1,00,612	3,485	

(*b*) *Drywood.*—Eighty-five thousand and eighty cubic feet of dry wood were sold and the amount realized was R2,128. The following table gives particulars for each district :—

	Forests.	Number.	Quantity.	Amount.
			C. ft.	R
Ajmere	By auction	...	21,080	527
	„ head-loads	2,841	6,840	171
Merwara.	„ head-loads	7,564	17,800	446
	„ donkey-loads	5,146	39,360	984
	Total		85,080	2,128

48. Twelve thousand four hundred and twelve bamboos were sold from the following blocks at rates varying from R2-8 to R1-7 per cent. :—

Bamboos.

	No.	Total.	Price.
			R
Mohwabir	45	345	19
Nagpahar	300		
Amner	700	12,067	178
Todgarh	6,767		
Dewair	4,600		
		Total	197

Grass and Grazing.

49. Full information under this head is given in Form No. 55. The following table shows the revenue realized from this source :—

	1888-89	1889-90	Remarks.
Gross	3,153	1,469	* Includes R161 grazing dues, Dewair Pass.
Grazing	209	636*	
Total	3,362	2,105	

Besides R2,700 worth of grass was supplied to the Military Department. This has not been entered in Form No. 55.

Other Minor Produce.

50. The revenue from this source may be compared with that of the past year thus :—

	1888-89.	1889-90.	REMARKS.
	R	R	
Fruits	392	156*	* Decrease due to the failure of mango crop in the Pashkar garden.
Honey and wax	75	103	
Dhâk leaves	101	106	
Miscellaneous		12	
TOTAL	568	377	

(iii) Free Grants of Forest Produce.

51. The following free-grants were made to the right-holders in Government Forest Reserves :—

DESCRIPTION OF PRODUCE.	Number or quantity.	ESTIMATED VALUE.		REMARKS.
		1889-90.	1888-89.	
	C. ft.	R	R	
Wood for household purposes	1,872	112	280	* Not given in last year's report.
Wood for agricultural purposes	273	19	95	
Grass (bundles)	1,692,560	79,338	67,083	
Grazing	...	1,006	1,006*	
TOTAL	...	80,475	68,464	

(iv.) Produce removed by Right-holders.

Twelve thousand nine hundred and eighty-eight cattle, including cows and buffaloes, were permitted to graze at 2 annas per cow, and 4 annas per buffalo from 1st March to end of June. The revenue realized amounted to R2,072, against R2,412 realized last year.

CHAPTER VI.

Financial Results.

52. The financial results of the year compare as follow with those of the two previous years :—

YEAR.	Revenue.	Expenditure.	Deficit.
	R	R	R
1887-88	14,293	18,898	4,605
1888-89	13,574	15,676	2,102
1889-90	11,592	12,701	1,109

The revenue was R1,982 less and the expenditure R2,975 less than the previous year.

Revenue.

53. The revenue R11,592 does not include R2,700, the value of grass supplied to the Military Department. If this amount be taken into account, there

would be a gross revenue of R11,592 + R2,700, or R14,292, which is R718 more than last year, and the year's transactions would show a surplus of R1,591. Again, if the estimated value of free grants of forest produce made to right-holders be also added, the total revenue of the Division would be:—

Rupees 14,292 + R80,475 = R94,767.

54. The gross expenditure was:—

Expenditure.

	1889-90.	1888-89.	Loss.
	R	R	R
A.—Conservancy and Works	1,444	2,932	1,488
B.—Establishment	11,257	12,744	1,487
TOTAL .	12,701	15,676	2,975

55. Arranged under the three main heads, the receipts and charges of the year, as contrasted with the previous year, stand as under:—

Year.	I.—TIMBER AND OTHER DEPARTMENTAL OPERATIONS.		II.—OTHER SOURCES.		III.—Formation, protection, and improvements.	TOTAL.	
	Receipts.	Charges.	Receipts.	Charges.		Receipts.	Charges.
	R	R	R	R	R	R	R
1888-89 . . .	996	549	12,578	5,098	10,029	13,574	15,676
1889-90 . . .	14	5	11,578	4,518	8,178	11,592	12,701

Form No. 49.

Area of Reserved Forests 1889-90.

Division.	Range.	Civil District or Teritory.	Name of Forest.	Area on 1st April 1889.		Added during the year.	Excluded or transferred to other heads.	Area on 31st March 1890.		No. and date of Notification of addition or transfer.	Remarks
				Acres.	Equivalent in square miles.	Acres.	Acres.	Acres	Equivalent in square miles.		
Ajmere-Merwara		Ajmere	Mahwabir and Madar Hill	2,736	4	...	...	2,736	4		
			Nagpahar	2,479	4	...	...	2,479	4		
			Taragarh Valley	1,226	2	...	...	1,226	2		
			Srinagar	3,623	6	...	...	3,623	6		
			Rajosi	1,152	2	...	...	1,152	2		
			Danta	1,580	3	...	...	1,580	3		
			Rajgarh	2,199	3	...	...	2,199	3		
			Makerwali Hokran	2,675	4	..	...	2,675	4		
			Total	17,670	28	...	...	17,670	28		
		Merwara	Chang	2,947	5	...	...	2,947	5		
			Sheopura	2,771	4	...	...	2,771	4		
			Beliawas	3,336	5	...	...	3,336	5		
			Todgarh	33,964	53	...	...	33,964	53		
			Dilwara and Chang Gate Birs	281	...	..	...	281	...		
			Borwar-Kotra and Siliberi	4,660	7	...	...	4,660	7		
			Anspahar	1,282	2	...	...	1,282	2		
			Dewair	12,968	20	...	...	12,968	20		
			Banjari-Mandalan	4,731	8	...	...	4,731	8		
			Amner	4,654	7	...	...	4,654	7		
			Total	71,594	111	...	...	71,594	111		
			GRAND TOTAL	89,264	139	...	...	89,264	139		

Form No. 50.

Register of Breaches of Forest Rules during 1889-90.

Forest Division and Civil District.	Cases pending from 1888-89.	NEW CASES OF THE YEAR.					Total cases.	DISPOSED OF DURING THE YEAR.						Cases pending at close of year.
		Injury to forest by fire.	Unauthorized felling or appropriation of wood and minor forest produce.	Grazing without permission, or in tracts in which grazing is prohibited.	Other offences.	Total new cases of the year.		CONVICTIONS.		ACQUITTALS.		TOTAL.		
								Cases.	Persons.	Cases.	Persons.	Cases.	Persons.	
A.—Cases tried by Magistrates.														
Ajmere District . . .	...	...	...	..	...	...	...	...	..	...	...	...	...	
Merwara „ . . .	...	2	22	4	3	31	31	30	48	1	2	31	50	
TOTAL .	...	2	22	4	3	31	31	30	48	1	2	31	50	
B.—Cases compounded by Forest Officer under the Ajmere Forest Regulation.														
Ajmere District . . .	...	...	96	40	...	136	136	136	262	...	...	136	262	
Merwara „	...	...	17	52	...	69	69	69	105	...	...	69	105	
TOTAL .	...	...	113	92	...	205	205	205	367	...	...	205	367	
GRAND TOTAL .	...	2	135	96	3	236	236	235	415	1	2	236	417	

Form No. 51.

Area of Forest Tracts protected from Fire during the Dry Season 1890.

Division.	Forest Tracts.	Year in which protection commenced.	Area actually protected up to 30th June 1889.	During dry season of 1890.			Cost during the season.	Remarks.
				Area attempted to be protected.	Failures.	Actually protected.		
	Area protected by special measures						R	
Ajmere	Nagpahar	1880	2,479	2,479	...	2,479	15	
	Taragarh Valley	1874	1,225	1 226	..	1,226	15	
	Rajosi	1880	1,152	1,152	...	1,152	15	
	Danta	1882	1,580	1,580	...	1,580	15	
	Rajgarh	1884	2,199	2,199	...	2,199	...	
Merwara	Chang	1881	2,947	2,947	...	2,947	...	
	Sheopura	1882	2,771	2,771	...	2,771	...	
	Beliawas	1874	3,336	3,336	...	3,336	..	
	Todgarh	1874	33,964	33,964	7	33,957	106	
	Borwar-Kotra	1882	4,137	4,137	..	4,137	...	
	Anspahar	1877	1,282	1,282	...	1,282	...	
	Dewair	1881	12,513	12,968	...	12,968	35	
	Banjari-Mandlan	1884	4,731	4,731	...	4,731	...	
	Amner	1884	4,654	4,654	...	4,654	18	
	Total	...	78,970	79,426	7	79,419	219	
	Area protected without the adoption of special measures.							
Ajmere	Mohwabir and Madar Hill	1876	2,736	2,736	...	2,736	...	
	Srinagar	1876	3,623	3,623	...	3,623	...	
	Makerwali-Hokran	1884	2,675	2,675	...	2,675	...	
Merwara	Dilwara and Chang Gate Bira	1876	271	281	...	281	...	
	Siliberi	1884	523	523	...	523	...	
	Total	...	9,828	9,838	...	9,838	...	
	GRAND TOTAL	...	88,798	89,264	7	89,257	219	

Form No. 52.

Area of Plantation, 1889-90.

Division.	Name of Plantation.	Area in acres. On 1st April, 1889.	Added during the year.	Excluded during the year.	Area on 31st March 1890.	Receipts Of the year.	Charges Of the year.	Remarks.
	I.—Out of the area taken up under the Regulation.					R	R	
Ajmere	Mohwabir and Madar Hill	70	9	...	79	...	...	
	Nagpahar	21	...	...	21	...	...	
	Taragarh Valley	66	...	...	66	...	...	
	Srinagar	18	10	...	28	...	...	
	Danta	30	2	...	32	...	93	
	Rajgarh	5	...	...	5	...	...	
	Makerwali-Hokran	33	5	...	38	...	110	
	Total	243	26	...	269	...	203	
Merwara	Dilwara and Chang Gate Birs	80	...	...	80	...	...	
	Chang	22	...	...	22	...	...	
	Borwar-Kotra	30	15	...	45	...	...	
	Sheopura	30	...	...	30	..	...	
	Beliawas	12	...	...	12	...	...	
	Banjari-Mandlan	3	...	...	3	...	...	
	Todgarh	47	...	...	47	...	...	
	Total	224	15	...	239	...	...	
	II.—Area not taken up under the Regulation.							
Ajmere	Shikast Masjid	6	...	...	6	...	..	
Merwara	Parade Plantation	8	...	...	8	...	...	
	Total	14	...	...	14	...	...	
	III.—Nurseries.							
Ajmere	Puskar Nursery	4	...	...	4	93	178	
	Bir Nursery	4	...	...	4	27	132	
Merwara	Sendra Nursery	..	1	...	1	12	160	
	General	...	...	...	...	...	56	
	Total	8	1	...	9	132	526	
	GRAND TOTAL	489	42	...	531	132	729	

Form No. 54.

Outturn (in cubic feet, solid) of Timber and Fuel during the year 1889-90, and Agency of Exploitation.

Division	Timber in rough, logs.					Timber in the rough, poles.					Sawn or squared timber.					Miscellaneous.					Fuel.					Total.
	Government Agency.	Purchasers.	Free grants.	Right-holders.	Total.	Government Agency.	Purchasers.	Free grants.	Right-holders.	Total	Government Agency.	Purchasers.	Free grants.	Right-holders.	Total.	Government Agency.	Purchasers.	Free grants.	Right-holders.	Total.	Government Agency.	Purchasers.	Free grants.	Right-holders.	Total.	Outturn.
	C. ft	C. ft.	C. ft.	C. ft.	C. ft	C. ft	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C ft	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.	C. ft.
Ajmere . .	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	37,920	...	...	37,920	37,920
Merwara . .	...	...	...	...	...	...	2,772	1,667	...	4,439	...	...	...	...	...	...	702	478	..	1,180	208	147,772	...	...	147,980	153,599
Total .	...	...	...	...	...	...	2,772	1,667	...	4,439	...	...	...	...	...	...	702	478	...	1,180	208	185,692	...	...	185,900	191,519

Form No. 55.

Outturn of Minor Forest Produce during the year 1889-90.

Division.	Description of Produce.	Produce removed or utilized										Remarks.
		By Government Agency.		By Purchasers.		By free grants.		By right-holders.		Total.		
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value	
			R		R		R		R		R	
Ajmere	Bamboos (No)	...	...	345	19	...	...	...	...	345	19	
	Fodder grass (maunds)	...	...	993	332	...	...	...	...	993	332	
	Ditto (head-loads)	...	.	636	45	7,70,346	36,110	...	...	770,982	36,155	
	Ditto (by auction)	...	...	...	762(a)	...	...	...	...	...	762	(a) This amount does not include R2,700, being the value of grass supplied to the Military Department (*vide* Comptroller General's No. 25, dated 3rd April 1890).
	Mung grass (do.)	...	...	...	68	...	...	..	...	.	68	
	Grazing (cattle), 4 months	...	...	12	3	330	41	3,316	491	3,658	535	
	Ditto (acres), 8 months	...	...	...	...	817	204	...	...	817	204	
	Fruits (by auction)	...	...	...	144	...	...	...	...	...	144	
	Dhâk leaves (do.)	...	...	...	69	...	...	...	...	...	69	
	Miscellaneous	...	...	...	10	...	...	...	...	...	10	
Merwara	Bamboos (No)	...	...	12,067	178	...	...	...	...	12,067	178	
	Fodder grass (head-loads)	...	...	2,437	68	922,214	43,228	...	...	9,24,651	43,296	
	Do. (by auction)	...	...	..	194	...	...	...	...	...	194	
	Grazing (cattle), 4 months	...	...	1,354	472	...	...	9,672	1,581	11,026	2,053	
	Ditto (acres), 8 months	...	...	...	...	300	75	...	...	300	75	
	Ditto (cattle) all the year round	...	...	...	...	915	686	...	...	915	686	
	Ditto dues Dewair Pass (lease).	...	...	...	161	...	...	..	...	...	161	
	Fruits (lease)	...	...	...	12	...	...	...	...	...	12	
	Honey and wax (by auction)	...	...	...	103	...	...	...	...	...	103	
	Dhâk leaves (do.)	...	...	...	37	...	...	...	...	...	37	
	Miscellaneous	...	...	...	2	...	...	...	...	...	2	
	Total	...	...	...	2,679	...	80,344	...	2,072	...	85,095	

Form No. 56.

Account of Timber and other Produce cut or collected by Government Agency and brought to Sale Depôts, or sold locally, during the year 1889-90.

Particulars.	No. or quantity.	Total of each head.			Particulars.	No. or quantity.	Cubic feet.	Total of each head.	
		Cubic feet.	No. or quantity.	Cubic feet.				No. or quantity.	Cubic feet.
	Mds.		Mds.			Mds.		Mds.	
Balance at commencement of the year—					*Sold locally—*				
					Charcoal	13	65	13	65
Received from the forests—					*Balance at close of the year—*				
Charcoal	13	65	13	65					
Total .	13	65	13	65	Total .	13	65	13	65

Form No 58.

Summary of Revenue of the different Divisions during 1889-90.

RECEIPTS.

	R	a.	p.
I.—Timber and other produce removed from the Forests by Government agency—			
a. Timber	...		
b. Firewood and charcoal	14	2	0
c. Bamboos	...		
d. Sandal-wood	...		
e. Grass and other minor produce	...		
II.—Timber and other produce removed from the forests by consumers or purchasers—			
a. Timber	174	5	3
b. Firewood and charcoal	5,612	10	0
c. Bamboos	196	12	6
d. Grazing and fodder grass	4,177	6	11
e. Other minor produce	376	13	2
III.—Drift and waif wood and confiscated forest produce	...		
IV.—Revenue from forests not managed by Government—			
a. Duty on foreign timber, and other forest produce	...		
b. Revenue from shared and private forests	...		
V.—Miscellaneous—			
a. Fines and forfeitures	777	11	2
b. Refunds	...		
c. Other sources	262	6	6
Total Receipts	11,592	3	6

Summary of Expenditure of the different Divisions during 1889-90.

A.—CONSERVANCY AND WORKS.

I.—Timber and other produce removed from the forests by Government agency—			
a. Timber	...		
b. Firewood and charcoal	5	7	0
c. Bamboos	...		
d. Sandal-wood	...		
e. Grass and other minor produce	...		
II.—Timber and other produce removed from the forests by consumers or purchasers—	...		
III.—Drift and waif wood and confiscated forest produce	...		
IV.—Reeenue from forests not managed by Gouernment—			
a. Duty on foreign timber and other forest produce	...		
b. Revenue from shared and private forests	...		
V.—Rent of leased forests and payments to shareholders in forests managed by Government	...		
VI.—Live stock, stores, tools and plant	...		
a. Purchase of cattle	...		
b. Feed and keep of cattle	9	0	9
c. Purchase of stores, tools and plant	40	6	0
Ccarried over	54	13	9

	R	a.	p.
Brought Forward	54	13	9
VII.—Communications and buildings—			
a. Roads and bridges	...		
b. Buildings	93	9	0
c. Other works	246	13	3
VIII.—Demarcation, improvement and extension of forests—			
a. Demarcation	1	8	9
b Compensation for land and rights	...		
c. Surveys and working plans	..		
d. Sowing and planting	729	1	11
e. Protection from fire	227	10	0
f. Other works	74	10	0
IX.—Miscellaneous—			
a. Refunds	1	11	6
b. Law charges	...		
c. Other charges	14	4	0
Total A.—Conservancy and Works	1,444	2	2

B —Establishment.

I.—Salaries—			
a. Conservators	...		
b. Superior officers	3,750	0	0
c. Subordinate forest and depôt establishments	4,613	3	6
d. Office establishments	1,291	15	4
e. Deputation and special allowances	...		
II.—Travelling Allowances—			
a. Conservators	...		
b. Superior officers	941	12	0
c. Subordinate forest and depôt establishments	247	10	1
d. Office establishments	2	13	6
III.—Contingencies—			
a. Stationery	2	13	0
b. Carriage of tents and records	78	4	7
c. Rents, rates and taxes	183	12	0
d. Pay of police guards	...		
e. Official postage	64	2	0
f. Sundries	80	2	0
Total B.—Establishments	11,256	8	0
GRAND TOTAL OF EXPENDITURE	12,700	10	2

J. BRIDGNELL,

Chief Supdt. in charge, Forest Account Branch.

Form No. 59.

Account Current for the year 1889-90.

Dr.

	R	a.	p.	R	a.	p.
To Cash Balance	.....			0	12	0
„ VIII.—Assessed Taxes—						
Income Tax—Deductions from salaries	.....			121	2	0
„ Revenue as per Annual Summary, Form No. 58	.....			11,592	3	6
„ Service Funds—						
Civil Fund—Ordinary, Bengal	.....			.....		
„ Additional, Bengal	.....			.....		
Military Fund—Bengal	.....			.....		
„ „ Madras	.....			.....		
„ Orphan Fund—Bengal	.....			.....		
Uncovenanted Service Family Pension Fund—Bengal	.....			.....		
General Family Pension Fund	.....			.....		
Hindu Family Annuity Fund	.....			.....		
„ Deposits	.....			212	8	9
„ Forest Cash Remittances—Local—						
Forest cheques drawn	12,579	0	0	.....		
Inter-Divisional Transfers	.....					
				12,579	0	0
„ Advances recoverable	.....			217	10	1
„ Suspense	.....			.....		
„ Account Current (other Governments)—						
Remittances from Government of	.....			.....		
„ Inter-Departmental Transfers—						
Public Works Department	.....			.....		
Military Department, Bombay	2,700	0	0	.....		
Civil Department—						
Jail	.....			.....		
Mathematical Instrument Department	.....			.....		
Miscellaneous	6	0	0	2,706	0	0
TOTAL	.....			27,429	4	4

Cr.

	R	a.	p.	R	a.	p.
By Expenditure as per Annual Summary Form No. 58	.....			12,700	10	2
„ Deposits	.....			212	8	9
„ Forest Cash Remittances—Local—						
Remittances to Treasuries	11,598	3	6	.....		
Inter-Divisional Transfers	.....					
				11,598	3	6
„ Advances recoverable	.....			201	5	5
„ Suspense	.....			.....		
„ Account Current (other Governments)—						
Remittances to the Government of	.....			.....		
„ Inter-Departmental Transfers—						
Public Works Department	.....			.....		
Military Department, Bombay	2,700	0	0	.....		
				2,700	0	0
Civil Department	.....			.....		
„ Cash Balance	.....			16	8	6
TOTAL	.....			27,429	4	4

J. BRIDGNELL,
Chief Supdt. in charge, Forest Account Branch.

Form No. 61.

Outstandings and Liabilities on account of Contractors and Disbursers for 1889-90.

Division	Department Debtor.			Department Creditor.			Balance Due		Remarks.
	At commencement of year.	Recoveries in cash and value of supplies and work done during the year.	At close of year.	At commencement of year.	Payments made during year.	At close of year	To Department (Outstandings).	By Department (Liabilities).	
	R a. p.	R a. p.	R a. p.	R a. p.	R a. p	R a. p.	R a p.	R a. p.	
Ajmere	3 2 9	217 10 1	220 12 10	25 0 8	201 5 5	226 6 1	5 9 3	.....	
Total .	3 2 9	217 10 1	220 12 10	25 0 8	201 5 5	226 6 1	5 9 3	.....	

Form No. 62.

Financial Results of the year 1889-90.

Division.	Timber and other produce removed from the forests by Government Agency.		Other revenue.		Formation, protection, and improvement of forests	Total.		Remarks.
	Receipts.	Charges.	Receipts.	Charges.	Charges.	Receipts.	Charges.	
	R	R	R	R	R	R	R	
Ajmere-Merwara . .	14	5	11,578	4,518	8,178	11,592	12,701	
Total .	14	5	11,578	4,518	8,178	11,592	12,701	

AJMERE DISTRICT.

Forest Revenue realized during the year ending 31st March 1890.

Budget Heads.	Mohwabir and Madar Hill.	Taragurh Valley.	Nagpahar.	Srinagar.	Rajosi.	Danta.	Rajgurh	Makerwali Hokran.	Shikast Masjid	General.	Total.
	R a. p	R a p	R a p	R a p	R a. p	R a. p.	R a. p.	R a. p	R a p	R a. p	R a. p.
II *b*. Firewood and charcoal	310 12 0	45 0 0	489 0 0	46 0 0	59 14 3	110 12 6	60 6 0	28 0 0	33 2 0	...	1,182 14 9
II*c*. Bamboos	1 2 0	...	18 0 0	...	...	...	...	...	..	...	19 2 0
II*d* Grazing and fodder grass	286 1 4	209 6 0	111 2 9	410 4 8	86 10 0	201 10 8	209 2 0	187 11 0	...	...	1,702 0 5
II*e* Minor produce	27 4 0	28 0 0	118 0 0	30 12 0	...	1 4 0	...	18 0 0	...	...	223 4 0
V*a* Fines and forfeitures	80 0 0	30 0 6	59 7 6	67 4 6	9 3 0	7 5 0	36 10 6	77 5 0	9 12 0	...	337 0 0
V*c*. Other sources	16 0 0	0 12 0	...	67 4 6	...	20 0 0	...	19 0 0	...	...	123 0 6
Total .	721 3 4	313 2 6	795 10 3	621 9 8	155 11 3	341 0 2	306 2 6	330 0 0	42 14 0	...	3,627 5 8

Forest Expenditure incurred during the year ending 31st March 1890.

Budget Heads.	Mohwabir and Madar Hill.	Taragurh Valley.	Nagpahar.	Srinagar.	Rajoori.	Danta.	Rajgurh.	Makerwali Hokran.	Shikast Masjid	General.	Total.
	R a p	R a. p	R a p.	R a. p	R a p	R a. p	R a. p	R a. p.	R a. p	R a. p	R a. p.
A.—Conservancy and Works.											
A VIb Feed and keep of cattle	...	...	3 8 6	...	...	...	...	...	...	...	3 8 6
„ VIe Stores, tools and plant	..	..	0 2 0	...	..	...	...	0 2 0	...	39 12 0	40 0 0
„ VIIb Buildings	7 4 0	18 2 0	10 12 0	8 0 0	...	...	...	...	...	...	44 2 0
„ VIIc Other works	137 11 0	..	...	..	...	...	0 4 0	...	...	...	137 15 0
„ VIIIa Demarcation	...	...	..	0 6 0	...	-	...	.	...	...	0 6 0
„ VIIId Plantation	...		178 6 0	132 5 0	..	93 1 11	...	109 10 0	...	...	513 6 11
„ VIIIe Fire-protection	...	12 3 11	13 4 11	...	14 14 7	14 14 7	...	.	...	...	55 6 0
„ VIIIf. Fencing	45 0 0	...	..	..	...	..	...	12 6 0	...	...	57 6 0
Total	189 15 0	30 5 11	206 1 5	140 11 0	14 14 7	108 0 6	0 4 0	122 2 0	...	39 12 0	852 2 5
B.—Establishment											
B Ib Pay of Superior Officer	...	...	.	...	.	...	..	.	...	3,750 0 0	3,750 0 0
„ Ic „ Forest Establishment	330 13 11	161 12 11	173 0 10	340 13 6	142 0 0	86 0 0	152 0 0	73 7 5	...	.	1 460 0 7
„ Id „ Office Establishment	...	.	..	...	...	...	...	..	...	1,291 15 4	1 291 15 4
„ IIb Travelling allowances of Superior Officers	...	...	...	...	...	...	...	..	..	941 12 0	941 12 0
„ IId „ Office Establishment	...	...	..	...	...	...	...	..	...	2 13 6	2 13 6
„ IIIa Country stationery	...	...	..	...	...	...	...	...	..	1 2 0	1 2 0
„ IIIb Carriage of tents and records	...	.	..	..	.	...	...	.	...	18 4 7	18 4 7
„ IIIc Rent	...	...	...	...	...	...	...	...	..	183 12 0	183 12 0
„ IIIe Official postage	...	...	...	...		...	...	..	...	64 2 0	64 2 0
„ IIIf Sundries	...	...	...	...	...	...	...	...	...	79 0 6	79 0 6
Total	330 13 11	161 12 11	173 0 10	340 13 6	142 0 0	86 0 0	152 0 0	73 7 5	...	6,332 13 11	7,792 14 6
GRAND TOTAL	520 12 11	192 2 10	379 2 3	481 8 6	156 14 7	194 0 6	152 4 0	195 9 5	..	6,372 9 11	8,645 0 11

MERWARA DISTRICT.

Forest Revenue realized during the year ending 31st March 1890.

Budget Heads	Chang	Sheopura.	Beliawas	Todgurh.	Dilwara and Chang Gate Bus.	Anspahar	Borwar-kotra	Dewair.	Amner.	Banjari Mandlan	General	Total
	R a. p.	R a. p	R a. p	R a. p	R a. p.	R a. p.	R a. p	R a p	R a p	R a p	R a p	R a. p
Ib Firewood and charcoal	14 2 0	...	...	...	...	...	...	..	..	...	...	14 2 0
IIa. Timber	28 14 3	9 8 0	23 6 0	31 13 0	...	...	18 8 0	52 8 0	9 12 0	.	...	174 5 3
IIb. Firewood and charcoal	1,931 10 3	126 4 6	20 5 6	1,822 2 9	...	157 7 0	360 9 6	7 11 9	3 8 0	...	...	4,429 11 3
IIc Bamboos	...	...	...	97 4 6	...	...	...	69 0 0	11 6 0	...	...	177 10 6
IId. Grazing and grass . . .	299 0 0	128 4 0	149 6 0	655 10 0	286 4 0	35 12 0	317 12 6	281 10 6	150 11 6	171 0 0	...	2,475 6 6
IIe. Other minor produce	23 0 2	3 5 0	20 14 0	49 11 7	...	...	2 5 0	25 1 8	15 5 2	13 14 7	..	153 9 2
Va. Fines and forfeitures . . .	47 6 7	11 1 0	27 4 0	182 7 10	9 5 6	6 8 0	12 4 6	36 6 3	34 9 6	33 6 0	...	400 11 2
Ve. Other sources	47 2 0	...	.	.	...	...	..	...	...	2 4 0	90 0 0	139 6 0
Total .	2,391 3 3	278 6 6	241 3 6	2,839 1 8	295 9 6	199 11 0	711 7 6	472 6 2	225 4 2	220 8 7	90 0 0	7,964 13 10

Forest Expenditure incurred during the year ending 31st March 1890.

Budget Heads.	Chang.	Sheopura.	Beliawas.	Todgurh.	Dilwara and Chang Gate Bira.	Anspahar.	Borwar-kotra.	Dewair.	Amner.	Banjari Mandlan.	General.	Total.
	R a. p.	R a. p.	R a. p.	R a. p.	R a. p	R a. p.	R a. p	R a. p.	R a. p.	R a. p.	R a. p.	R a. p.
A.—Conservancy and Works.												
A Ib. Firewood and charcoal	5 7 0	...	...	...	...	...	...	...	...	...	...	5 7 0
„ VIb. Feed and keep of cattle	5 8 3	...	..	...	...	...	...	...	...	...	...	5 8 3
„ VIc. Stores, tools and plant	...	...	0 6 0	...	...	...	...	...	...	...	...	0 6 0
„ VIIb. Buildings	..	...	19 0 0	0 10 0	...	...	...	16 13 0	13 0 0	...	...	49 7 0
„ VIIc. Other works	...	...	...	108 10 3	0 4 0	...	...	...	...	...	..	108 14 3
„ VIIIa. Demarcation	0 6 3	...	0 12 6	...	...	...	...	...	...	...	...	1 2 9
„ VIIId. Plantation	159 8 0	...	...	..	...	...	...	...		...	56 3 0	215 11 0
„ VIIIe. Fire protection	...	...	...	117 11 10	...	..	...	24 8 2	20 0 0	10 0 0	..	172 4 0
„ VIIIf. Other works	17 4 0	...	...	..	...	...	...	...	...	..	...	17 4 0
„ IXa. Refunds	...	...	...	...	...	...	.	...	...	...	1 11 6	1 11 6
„ IXc. Other charges	...	...	...	...	...	...	...	...	..	...	14 4 0	14 4 0
Total	188 1 6	...	20 2 6	227 0 1	0 4 0	...	...	41 5 2	33 0 0	10 0 0	72 2 6	591 15 9
B.—Establishment.												
B Ic. Pay of Subordinate Forest Establishment.	361 13 3	70 6 9	285 15 5	640 0 3	72 1 6	74 0 0	170 10 3	330 11 2	147 5 7	211 0 10	789 1 11	3,153 2 11
„ IIc. Travelling allowance of Subordinate Forest Establishment.	...	...	...	...	...	...	..	...	...	...	247 10 1	247 10 1
„ IIIa Country stationery	...	...	...	...	...	...	...	...	...	...	1 11 0	1 11 0
„ IIIb. Carriage of tents	...	...	...	...	...	..	...	...	..	...	60 0 0	60 0 0
„ IIIf. Sundries	...	...	...	...	...	...	...	...	..	...	1 1 6	1 1 6
Total	361 13 3	70 6 9	285 15 5	640 0 3	72 1 6	74 0 0	170 10 3	330 11 2	147 5 7	211 0 10	1,099 8 6	3,463 9 6
GRAND TOTAL	549 14 9	70 6 9	306 1 11	867 0 4	72 5 6	74 0 0	170 10 3	372 0 4	180 5 7	221 0 10	1,171 11 0	4,055 9 3

APPENDIX A.

Statement showing rainfall registered during the year 1889.

Calendar Year.	Mohwabir.				Madar Hill.		Bajrúagarh		Nagpahar.				Rajgarh.				Danta.				Dilwara Bir.			
	Inside Forest.		Outside Forest						Inside Forest.		Outside Forest.		Inside Forest		Outside Forest.		Inside Forest		Outside Forest.		Inside Forest.		Outside Forest.	
	Inches.	Ct	Inches	Ct	Inches	Ct.	Inches	Ct.	Inches	Ct	Inches	Ct	Inches	Ct.	Inches	Ct.	Inches.	Ct	Inches	Ct	Inches	Ct	Inches	Ct.
January	...	.	...	.	...	65	...	60	.	88	...	70	...	34	...	31	...	26	...	25	...	18	...	17
February	..	66	...	.	...	29	..	37	..	37	...	14	...	25	...	23	...	21	...	17	...	16	...	12
March	...	34	...	35	...	57	...	56	...	47	...	53	...	17	...	16	...	13	...	10	...	.	...	...
April		12	...	10	...	4	...	5	...	2	...	..	...	2	...	2	...	2	..	2	...	16	...	12
May	1	61	1	36	1	5	1	4	1	67	1	36	1	69	1	61	1	20	1	16	...	63	...	55
June	3	2	2	94	4	54	3	49	3	70	2	69	6	1	5	93	3	46	3	20	7	70	6	87
July	4	44	3	91	6	18	3	62	5	50	4	49	4	22	4	49	3	99	4	7	3	83	3	93
August	13	16	13	9	11	24	10	57	14	80	10	80	12	91	12	57	6	49	6	43	9	6	9	5
September	...		..		...	9	...	9	..		...	...	...	...	.		...	.	...	.	...	10	...	8
October	2	..	1	50	1	32	1	60	...	4	...	5	...	17	...	15	...	95	1	.	...	..	...	...
November	...	...	...	...	...	.	..	..	...	..	...	.	...	...	...		...	..	...	..	...	..	..	...
December	...	..	...	.	...	...	...	.	...	...	...	.	...	..	...	.	.	...	...	..	...	..	...	...
Total	25	35	23	93	25	97	21	99	27	45	20	76	25	78	25	47	16	71	16	40	21	82	20	89
Total for 1888	28	..	22	93	23	25	19	32	24	42	17	74	18	85	18	76	17	48	17	36	18	17	16	29

APPENDIX B.

METEOROLOGICAL OBSERVATIONS (STATION A).

Results of Meteorological Observations conducted at the Ajmere Forest Nursery, 1,640 feet above sea-level. Observatories of the standard pattern. Cages with instruments 4 feet above ground.

Calender Year 1889.	Dry minimum.		Dry maximum.		Daily means.		Mean Vapour tension.						Mean relative humidity.						Rainfall.
							Under trees.			Outside trees.			Under trees.			Outside trees.			
	Under trees.	Outside trees.	Under trees.	Outside trees.	Under trees.	Outside trees.	From Minima.	At 10 hours.	At 16 hours.	From Minima.	At 10 hours.	At 16 hours.	From Minima.	At 10 hours.	At 16 hours.	From Minima.	At 10 hours.	At 16 hours.	
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches	Inches.
January	43·1	42·3	72·9	75·3	57·6	58·7	·232	·272	·252	·238	·273	·260	82	46	34	86	43	33	0·50
February	47·5	46·8	75·2	77·5	61·3	62·2	·310	·343	·287	·298	·338	·282	91	54	35	90	50	33	0·32
March	57·8	56·9	89·2	91·6	74·1	75·4	·447	·472	·425	·429	·437	·384	91	46	33	92	40	27	0·49
April	65·2	63·9	97·6	99·8	82·4	83 3	·586	·457	·400	·572	·406	·350	92	35	24	96	29	20	0·03
May	71·0	70·0	102·5	105·0	86·6	87·7	·686	·575	·541	·656	·529	·501	89	40	29	91	35	25	1·11
June	75·8	75·1	96·9	99·2	84·7	85 6	·799	·791	·759	·774	·759	·737	88	65	47	88	60	44	3·64
July	76·0	75·3	89·6	91·4	81·6	82·4	·850	·842	·822	·808	·806	·792	93	75	62	93	69	58	3·84
August	74·7	73·9	84·1	86·0	78·3	79·0	·817	·841	·827	·792	·804	·798	94	87	75	95	77	70	12·72
September	68·5	68 9	91·2	92·9	78·4	79·7	·614	·677	·665	·603	·682	·655	87	61	48	84	58	46	0·17
October	52·9	52·4	89·2	91 0	69 9	71·1	·365	·394	·390	·333	·431	·425	86	36	31	81	38	31	1·35
November	41·8	41·4	82·1	82·2	60·2	61·4	·234	·287	·284	·191	·301	·304	87	34	30	73	34	30	...
December	38·1	37 6	78·8	79·8	58·2	51·2	·199	·231	·246	·186	·247	·235	86	30	28	82	31	25	...
Total of 1889	712·4	704·5	1049 3	1071·7	873·3	877·7	6·139	6·182	5·898	5·880	6·013	5·723	1,066	609	476	1,051	564	442	24·17
Average	59·4	58·7	87·4	89·3	72·8	73·1	·512	·515	·491	·490	·501	·477	89	51	39	87	47	37	...
Total of 1888	738 0	732·3	1041·9	1068·7	878·8	876·5	5·317	5·573	5·472	5·171	5·760	5·657	899	565	451	904	563	447	24·82
Average	61·5	61·0	86·8	89·1	73·2	73·0	·443	·464	·456	·431	·480	·471	75	47	38	75	47	37	...

APPENDIX C.

METEOROLOGICAL OBSERVATIONS (STATION B).

Results of Meteorological Observations conducted at the Mohwabir Forest Reserves (Ajmere) about 1,680 feet above sea-level. Observatories of the Dehra-Dun Forest School Pattern. Cages with instruments 4 feet above ground.

Calendar year 1889.	Dry minimum		Dry maximum.		Daily means.		Mean vapour tension.						Mean relative humidity.						Rainfall.	
							Inside Forest.			Outside Forest.			Inside Forest.			Outside Forest.				
	Inside Forest.	Outside Forest.	Inside Forest.	Outside Forest.	Inside Forest.	Outside Forest.	From Minima.	At 10 hours.	At 16 hours.	From Minima.	At 10 hours.	At 16 hours.	From Minima.	At 10 hours.	At 16 hours.	From Minima.	At 10 hours.	At 16 hours.	Inside.	Outside.
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
January	41·7	40 9	74·4	73·4	57·2	56·9	·242	·312	·302	·206	·314	·297	91	52	41	79	52	39	0·70	0·50
February	47·1	46·4	76·7	75·5	61·6	61·7	·321	·365	·314	·279	·359	·302	96	56	38	85	57	37	0·39	0·30
March	57·9	57·1	91·3	90·0	74·6	74·1	·461	·479	·444	·408	·516	·479	94	45	33	86	49	36	0·50	0·64
April	65·4	64·5	99·5	98·4	83·0	82·6	·595	·472	·421	·540	·460	·402	93	35	25	88	34	23	0·06	0·05
May	70·7	69·6	105·8	104·2	87·6	87·0	·670	·572	·552	·613	·539	·516	88	38	27	85	36	26	1·42	1·11
June	75·7	75 1	99·5	98·3	85·5	85·1	·789	·785	·759	·736	·771	·742	87	62	46	84	62	46	4·28	4·16
July	75·2	76·0	92·3	91·0	82·1	82·2	·821	·833	·815	·812	·828	·810	92	72	59	90	72	60	5·06	4·44
August	74·0	74·3	86·0	85·1	78·5	78·5	·805	·823	·815	·770	·817	·803	94	81	73	90	81	72	12·43	12·72
September	68 5	70·8	93·9	93 2	79·3	80·6	·619	·718	·700	·635	·715	·700	88	60	49	85	60	49	0·19	0·15
October	52·3	56·2	92·1	91·5	71·0	72·5	·351	·423	·433	·366	·442	·439	85	36	32	77	38	32	2·10	2·05
November	38·2	46·5	84·5	84·0	60·5	63·6	·205	·319	·321	·256	·280	·293	88	33	32	79	31	29	...	...
December	34·1	44·1	81·4	80·1	58·2	61·3	·773	·266	·259	·236	·263	·237	87	30	26	81	33	25	...	...
Total for 1889	700·8	721·5	1077·4	1064·7	879·1	886·1	6·652	6·367	6·135	5·857	6·304	6·020	1,083	600	481	1,009	605	474	27·13	26·12
Average	58·4	60·1	89·8	88·7	73·2	73·8	·554	·530	·511	·488	·525	·501	90	50	40	84	50	40	...	...
Total for 1888	721 3	743·3	1060·4	1044·3	877·2	887·3	5 040	6·148	6·119	5·098	6·481	6·491	906	602	493	859	639	525	27·04	24·50
Average	60·1	61·9	88·4	87·0	73·1	73·9	·420	·512	·510	·425	·540	·541	75	50	41	71	53	44	...	...

APPENDIX D.

METEOROLOGICAL OBSERVATIONS (STATION C).

Results of Meteorological Observations conducted at Rawli Forest Reserves (Todgurh Block) about 2,800 feet above sea-level. Observatories of the Dehra-Dun Forest School Pattern. Cages with instruments 4 feet above ground.

Calendar Year 1890.	Dry minimum.		Dry maximum.		Daily means.		Mean vapour tension.						Mean relative humidity.						Rainfall.	
							Inside Forest.			Outside Forest			Inside Forest.			Outside Forest.				
	Inside Forest.	Outside Forest.	Inside Forest.	Outside Forest.	Inside Forest.	Outside Forest.	From Minima.	At 10 hours.	At 16 hours.	From Minima.	At 10 hours.	At 16 hours.	From Minima.	At 10 hours.	At 16 hours.	From Minima.	At 10 hours.	At 16 hours.	Inside	Outside.
	Inches.	Inches.	Inches	Inches	Inches.	Inches.	Inches.	Inches	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches	Inches.	Inches.	Inches	Inches.	Inches.
January	46·9	49·2	78·7	78·0	61·9	62 9	·250	·252	·244	·260	·261	·241	76	36	27	74	38	27	0 08	0·03
February	50·6	53 0	80 8	79·7	64·8	65·4	·263	·257	·264	·268	·262	·260	71	37	27	67	38	27	0 01	0·03
March	59·4	61·1	92·9	91·6	76·3	76 4	·280	·280	·279	·293	·259	·246	54	25	20	54	24	18	.	.
April	70·5	71·9	99·3	98 6	84·8	84 9	·355	·459	·464	·362	·453	·454	48	34	26	46	34	26		0 08
May	77·0	78 0	102·9	103·2	89·7	89·3	·403	·385	·367	·440	·387	·370	45	25	19	47	27	19	2·04	1 54
June	79·1	79·7	98·7	100 9	86·8	86·1	·539	·551	·580	·510	·548	·572	54	41	37	49	43	39	7 65	6·87
July	77 3	78 2	92·5	95·0	82·7	82·1	666	·627	·691	·682	·629	·667	71	51	52	71	54	52	6·18	5·63
August	77·0	77·4	88·5	90·4	80·8	80·2	·674	·667	·702	·701	·658	·702	72	60	59	74	62	61	8·01	7 51
September	74·7	75·1	89·3	91·2	80·1	79·6	·534	·585	·621	·565	·592	·617	62	51	51	64	53	52	0 32	0·31
October	67·2	67·8	87·2	89·4	74 2	73 8	·339	·329	·366	·350	·340	·365	52	32	32	53	33	33	..	...
November	50·0	52·7	83·8	82 9	64·1	80 5	·309	·309	·304	·318	·331	·335	83	39	30	78	39	32	...	.
December	43·9	45·2	83·3	83·8	61·9	61 4	·187	·261	·267	·183	285	·320	61	32	26	60	37	33	.	.
Total	773 6	789·3	1077 9	1084·7	908·1	922 6	4·799	4·962	5·149	4·932	5 005	5·149	749	463	406	737	482	419	24·29	22 02
Average	64·5	65·8	89·8	90·4	75·7	76·9	·400	·413	·429	·411	·417	·429	62	38	34	61	40	35	...	...
Total for 1888	751·6	767·2	1072·3	1063·8	889·5	895·8	5·464	5 449	5·538	5·423	5 718	5·652	894	550	445	865	562	451	22 86	22 87
Average	62·6	63·9	89 3	88·6	74·1	74·6	·455	·454	·461	·452	·476	·471	74	46	37	72	47	38	...	...

APPENDIX E.

WELL EXPERIMENT—MOHWABIR RESERVE.

AREA AND DESCRIPTION OF CATCHMENT ABOVE WELLS.—*The area is about 200 acres with a catchment consisting of a fairly broad valley with numerous small streams coming into the main nala. The rock is close to the surface and abounds in quartz, so that the soil is very poor. This tract was taken up in 1872.*

Date.	Well No. 1.	Well No. 2.	Well No. 3.	REMARKS.
22nd March 1889 . .	35·83	32·75	27·00	These wells are situated along the bed of a stream, well No. 3 being the highest up the stream. Distance between wells Nos. 1 and 2 is 1,417 feet, and between wells Nos. 2 and 3, 1,573 feet. The present growth chiefly consists of Khejra, Babul, Arinja and Nim which came out in full leaf in the beginning of April. Grass-cutting commenced in November and was continued till the end of April 1890.
29th „ „ . .	38·25	33·00	27·41	
5th April „ . .	38·75	33·41	27·75	
12th „ „ . .	39·25	33·75	28·00	
19th „ „ . .	39·75	34·16	28·33	
26th „ „ . .	40·00	34·33	28·41	
3rd May „ . .	40·33	34·75	28·66	
10th „ „ . .	40·75	35·66	29·58	
17th „ „ . .	41·41	36·00	30·00	
24th „ „ . .	41·50	36·16	31·00	
29th „ „ . .	42·33	36·75	32·00	No fires occurred during the year.
7th June „ . .	42·50	37·00	32·10	Rainfall from 1st March 1887 to 1st March 1888=27·50 inch.
14th „ „ . .	42·25	36·00	30·00	
21st „ „ . .	42·50	36·10	30·10	Rainfall from 1st March 1888 to 1st March 1889=26·96 inch.
28th „ „ . .	43·00	36·41	30·33	
5th July „ . .	43·00	36·50	30·66	South-West monsoons set in on 10th June 1889.
12th „ „ . .	42·66	36·41	30·58	
TOTAL .	694·06	599·14	501·91	
AVERAGE . . .	40·83	35·24	29·52	
AVERAGE FOR 1888 .	63·00	38·88	33·36	

APPENDIX F.

WELL EXPERIMENT—DANTA RESERVE.

DANTA.—*The catchment area below wells is about 700 acres. The valley is broad and gently undulating. The valley has a fair depth of soil, the hills and the undulating ground have the rock quartzite close to the surface with little soil. The tract was reserved in 1880.*

POPSING NALA.—*The catchment above well is 1,500 acres consisting of open hill-sides with very little soil on them. The rock is almost entirely quartzite.*

Date.	INSIDE FOREST.				OUTSIDE FOREST.	REMARKS.
	Well No. 1.	Well No. 2.	Well No. 3.	Well No. 4.	Popsing Nala, No. 3.	
19th March 1889 .	30·50	24·40	23·00	17·50	16·41	*Danta Reserve.* Rainfall from March 1887 to 1888—22·46. Rainfall from March 1888 to 1889—16·92. The sides of the hill are fairly well clothed with small scrub and grass. There were no fires during the year. The wells are equidistant from one another. Plantation work has been started along the nala in which these wells are situated. South-west monsoons set in on 6th June 1889. *Popsing Nala.* This well is situated on the other side of these hills. The catchment area consists of open hill-sides which are very bare, with only a few stunted shrub and a few euphorbias. Grazing goes on throughout the year, and so no grass grows.
24th „ „ .	30·58	24·41	23·66	17·83	17·00	
31st „ „ .	30·75	24·58	24·00	17·91	17·58	
11th April „ .	31·25	24·66	24·08	18·41	17·75	
23rd „ „ .	31·66	25·00	24·16	19·33	17·83	
30th „ „ .	32·10	25·16	24·41	21·00	17·91	
9th May „ .	32·66	25·33	Dried.	Dried.	17·75	
14th „ „ .	33·00	25·50	...	...	17·83	
21st „ „ .	33·41	25·58	...	...	18·50	
28th „ „ .	33·58	25·83	...	...	18·00	
4th June „ .	34·00	25·83	...	...	18·25	
11th „ „ .	34·16	25·58	...	...	18·00	
18th „ „ .	34·00	25·58	...	...	Dried.	
25th „ „ .	34·08	25·75	...	...	...	
2nd July „ .	33·91	25·66	...	...	...	
TOTAL .	489·64	378·85	143·31	111·98	212·81	
AVERAGE .	32·64	25·27	23·88	18·66	17·73	
AVERAGE FOR 1888	27·12	20·99	18·91	15·10	14·33	

APPENDIX G.

WELL EXPERIMENTS—RAJGURH RESERVE.

The catchment area is about 1,500 acres. The ravines come down somewhat abruptly from the main ridge and forming a somewhat narrow outlet for the water through the hills. The rock is chiefly quartzite with sand-hill at the foot of the main ridge.

Date.	Well No. 1.	Remarks
17th March 1889.	17·00	The catchment area in which this well is situated has a very fair growth of shrubs, with a few large trees, chiefly khejra and arinjas, scattered over. Grass was cut from November to the end of February. No fire occurred.
26th " " .	17·25	
12th April " .	17·66	Rainfall from 1st March 1887 to 1888=16·05 inches.
		" " " 1888 to 1889=17·55 "
23rd " " .	18 25	South-west monsoons set in on 10th January 1889.
30th " " .	18 58	
6th May " .	18·91	
13th " " .	19·25	
20th " " .	19·41	
27th " " .	19·50	
4th June " .	19 66	
11th " " .	19 83	
18th " " .	19·58	
25th " " .	19 66	
2nd July " .	19 33	
Total .	263·87	
Average .	18 85	
Average for 1888	16·60	

Dated Ajmere,
The 19th July 1890.

HIRALAL SINGH,
Sub-Asst. Conservator of Forests.

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